

## Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: SSSPTA1648BQL

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 09:39:33 ON 15 OCT 2004

=> file caplus  
COST IN U.S. DOLLARS  
  
FULL ESTIMATED COST

| SINCE FILE<br>ENTRY | TOTAL<br>SESSION |
|---------------------|------------------|
| 0.21                | 0.21             |

FILE 'CAPLUS' ENTERED AT 09:39:44 ON 15 OCT 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS).

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 15 Oct 2004 VOL 141 ISS 17  
FILE LAST UPDATED: 14 Oct 2004 (20041014/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> reverse (l) termal (l) L1
      183766 REVERSE
      7695 REVERSES
      190691 REVERSE
                  (REVERSE OR REVERSES)
      21 TERMAL
      0 REVERSE (L) TERMAL (L) L1
L2
```

=> reverse (l) Thermal  
183766 REVERSE  
7695 REVERSES  
190691 REVERSE  
                  (REVERSE OR REVERSES)  
951547 THERMAL  
66 THERMALS  
951576 THERMAL  
                  (THERMAL OR THERMALS)  
L3              4539 REVERSE (L) THERMAL

### 1.3.1.1.2

L4 142 L1 AND L3

ES 6 ANTES

L5 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

DOCUMENT NUMBER: 137:37682  
 TITLE: Bioactive agent delivering system comprised of  
 microparticles within a biodegradable to improve  
 release profiles  
 INVENTOR(S): Shih, Chung; Zenter, Gaylen  
 PATENT ASSIGNEE(S): Macromed, Inc., USA  
 SOURCE: U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S.  
 Ser. No. 559,507.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| US 2002076441  | A1   | 20020620 | US 2001-906041  | 20010713 |
| US 6589549   | B2   | 20030708 |                 |          |
| US 6287588   | B1   | 20010911 | US 2000-559507  | 20000427 |
| WO 2003005961  | A2   | 20030123 | WO 2002-US22017 | 20020712 |
| WO 2003005961  | A3   | 20040304 |                 |          |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,<br>CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,<br>GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,<br>LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,<br>PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,<br>UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,<br>TJ, TM<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,<br>CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,<br>PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,<br>NE, SN, TD, TG |      |          |                 |          |
| EP 1414406   | A2   | 20040506 | EP 2002-749958  | 20020712 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK   |      |          |                 |          |

PRIORITY APPLN. INFO.:  
 US 2000-559507 A2 20000427  
 US 1999-131562P P 19990429  
 US 2001-906041 A 20010713  
 WO 2002-US22017 W 20020712

AB A composition and method for releasing a bio-active agent or a drug within a biol. environment in a controlled manner is disclosed. The composition is a dual phase polymeric agent-delivery composition comprising a continuous biocompatible gel phase, a discontinuous particulate phase comprising defined microparticles and an agent to be delivered. A microparticle containing a bio-active agent is releasably entrained within a biocompatible polymeric gel matrix. The bioactive agent release may be contained in the microparticle phase alone or in both the microparticles and the gel matrix. The release of the agent is prolonged over a period of time, and the delivery may be modulated and/or controlled. In addition, a second agent may be loaded in some of the microparticles and/or the gel matrix. A microparticle **reverse thermal** gelation agent delivery system contained Zn-hGH incorporated into glycolide-lactide **copolymer** microspheres.

L5 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2002:158298 CAPLUS  
 DOCUMENT NUMBER: 136:189325  
 TITLE: Delivery vehicle composition and methods for  
 delivering **antigens** and other drugs  
 INVENTOR(S): Blonder, Joan P.; Coeshott, Claire M.; Rodell, Timothy  
 C.; Schauer, Wren H.; Rosenthal, Gary J.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 32 pp., Cont.-in-part of U.S.  
 Ser. No. 602,654.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE        |
|------------------------|------|----------|-----------------|-------------|
| US 2002025326          | A1   | 20020228 | US 2001-888235  | 20010622    |
| PRIORITY APPLN. INFO.: |      |          | US 2000-602654  | A2 20000622 |
|                        |      |          | US 2001-278267P | P 20010323  |

AB The present invention provides an immunogen composition and methods for using the same for the development of immunity, and particularly at mucosal sites in a mammal, thereby providing immunity at the site of entry for many major pathogenic organisms and also systemic immunity. The immunogen composition includes an **antigen**, a biocompatible polymer, and a liquid vehicle, with the biocompatible polymer and liquid vehicle being present in such proportions and interacting in such a way that the immunogen composition exhibits **reverse-thermal** viscosity behavior. A delivery vehicle composition including a drug other than an **antigen** is also provided. Methods are provided for delivering the compns. of the invention to a host.

L5 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:10235 CAPLUS

DOCUMENT NUMBER: 136:58777

TITLE: Methods for use of delivery composition for expanding, activating, committing or mobilizing one or more pluripotent, self-renewing and committed stem cells

INVENTOR(S): Talmadge, James E.; Rosenthal, Gary J.; Etter, Jeffrey B.

PATENT ASSIGNEE(S): Rxkinetix, Inc., USA; Board of Regents of the University of Nebraska

SOURCE: PCT Int. Appl., 39 pp.  
CODEN: PIIXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2002000173   | A2   | 20020103 | WO 2001-US20544 | 20010626   |
| WO 2002000173   | A3   | 20020613 |                 |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| AU 2001073041   | A5   | 20020108 | AU 2001-73041   | 20010626   |
| US 2002028515   | A1   | 20020307 | US 2001-893372  | 20010626   |
| US 6649189  | B2   | 20031118 |                 |            |
| US 2002102272   | A1   | 20020801 | US 2001-893339  | 20010626   |
| PRIORITY APPLN. INFO.:  |      |          | US 2000-214298P | P 20000626 |
|   |      |          | US 2001-274891P | P 20010309 |
|   |      |          | WO 2001-US20544 | W 20010626 |

AB A hematopoietic growth factor delivery composition includes a hematopoietic growth factor, a liquid vehicle, a first biocompatible polymer and a second biocompatible polymer. The composition exhibits **reverse-thermal** viscosity behavior, due to interaction between the first

biocompatible polymer and the liquid vehicle. The second biocompatible polymer helps to protect the first biocompatible polymer from being dissolved in vivo following administration to a host.

L5 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2001:935520 CAPLUS  
DOCUMENT NUMBER: 136:68695  
TITLE: Delivery vehicle composition and methods for delivering **antigens** and other drugs  
INVENTOR(S): Rosenthal, Gary J.; Rodell, Timothy C.; Blonder, Joan P.; Coeshott, Claire M.; Schauer, Wren H.  
PATENT ASSIGNEE(S): Rxkinetix, Inc., USA  
SOURCE: PCT Int. Appl., 67 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2001098206   | A1   | 20011227 | WO 2001-US20096 | 20010622   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| EP 1315672  | A1   | 20030604 | EP 2001-954595  | 20010622   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |      |          |                 |            |
| PRIORITY APPLN. INFO.:  |      |          | US 2000-602654  | A 20000622 |
|   |      |          | US 2001-278267P | P 20010323 |
|   |      |          | WO 2001-US20096 | W 20010622 |

AB The present invention provides an immunogen composition and methods for using the same for the development of immunity, and particularly at mucosal sites in a mammal, thereby providing immunity at the site of entry for many major pathogenic organisms and also systemic immunity. The immunogen composition includes an **antigen**, a biocompatible polymer, and a liquid vehicle, with the biocompatible polymer and liquid vehicle being present in such proportions and interacting in such a way that the immunogen composition exhibits **reverse-thermal viscosity** behavior. A delivery vehicle composition including a drug other than an **antigen** is also provided. Methods are provided for delivering the compns. of the invention to a host.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2001:405716 CAPLUS  
DOCUMENT NUMBER: 135:362450  
TITLE: Biodegradable block **copolymers** for delivery of proteins and water-insoluble drugs  
AUTHOR(S): Zentner, G. M.; Rathi, R.; Shih, C.; McRea, J. C.; Seo, M.-H.; Oh, H.; Rhee, B. G.; Mestecky, J.; Moldoveanu, Z.; Morgan, M.; Weitman, S.  
CORPORATE SOURCE: MacroMed Inc., Sandy, UT, 84070, USA  
SOURCE: Journal of Controlled Release (2001), 72(1-3), 203-215  
CODEN: JCREEC; ISSN: 0168-3659  
PUBLISHER: Elsevier Science Ireland Ltd.  
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Release of several drugs from new ABA-type biodegradable **thermal** gels, ReGel, including proteins and conventional mols., are presented. These are biodegradable, biocompatible polymers that demonstrate **reverse thermal** gelation properties. Organic solvents are not used in the synthesis, purification, or formulation of these polymers. The unique characteristics of ReGel hinge on the following two key properties: (1) ReGel is a water soluble, biodegradable polymer at temps. below the gel transition temperature; (2) ReGel forms a water-insol. gel once injected. This is consistent with a hydrophobically bonded gel state where all interactions are phys., with no covalent crosslinking. An increase in viscosity of approx. 4 orders of magnitude accompanies the sol-gel transition. The gel forms a controlled release drug depot with delivery times ranging from 1 to 6 wk. ReGel's inherent ability to solubilize (400 to >2000-fold) and stabilize poorly soluble and sensitive drugs, including proteins is a substantial benefit. The gel provided excellent control of the release of paclitaxel for approx. 50 days. Direct intratumoral injection of ReGel/paclitaxel (OncoGel) results in a slow clearance of paclitaxel from the injection site with minimal distribution into any organ. Efficacies equivalent to maximum tolerated systemic dosing were observed at

OncoGel doses that were 10-fold lower. Data on protein release (pGH, G-CSF, insulin, rHbsAg) and polymer biocompatibility are discussed.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:790276 CAPLUS

DOCUMENT NUMBER: 133:340262

TITLE: Drug delivery system based on biodegradable polyester microparticles

INVENTOR(S): Shih, Chung; Zentner, Gaylen M.

PATENT ASSIGNEE(S): Macromed, Inc., USA

SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2000066085   | A1   | 20001109 | WO 2000-US11387 | 20000428   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| US 6287588  | B1   | 20010911 | US 2000-559507  | 20000427   |
| PRIORITY APPLN. INFO.:  |      |          | US 1999-131562P | P 19990429 |
|   |      |          | US 2000-559507  | A 20000427 |

AB A composition and method for releasing a bioactive agent or a drug within a biol. environment in a controlled manner is disclosed. The composition is a dual phase polymeric agent-delivery composition comprising a continuous biocompatible gel phase, a discontinuous particulate phase comprising defined microparticles and an agent to be delivered. A microparticle containing a bio-active agent is entrained within a biocompatible polymeric gel matrix. The bio-active agent release may be contained in the microparticle phase alone or in both the microparticles and the gel matrix. The release of the agent is prolonged over a period of time, and

the delivery may be modulated and/or controlled. In addition, a second agent may be loaded in some of the microparticles and/or the gel matrix. Zn-human growth hormone was incorporated into poly(DL-lactide-co-glycolide) microspheres. The microspheres were added to **reverse thermal** gelation solution (RTG) (20% in 10 mM HEPES buffer, pH 7.0) to suspend the particles. The RTG-microparticle system of the present invention effectively reduced the initial burst effect of the microparticle delivery system.2 0 EXAMPLE.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> 25R1  
L6 9 25R1

=> polymer and L6  
970735 POLYMER  
808217 POLYMERS  
1317946 POLYMER  
(POLYMER OR POLYMERS)  
L7 2 POLYMER AND L6

=> 31R1  
L8 35 31R1

=> polymer and L8  
970735 POLYMER  
808217 POLYMERS  
1317946 POLYMER  
(POLYMER OR POLYMERS)  
L9 7 POLYMER AND L8

=> B L7 IBIB ABS1-2

'L7' IS NOT A VALID FILE NAME

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE):L7

'L7' IS NOT A VALID FILE NAME

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE):D L7 IBIB ABS 1-2

'D' IS AN AMBIGUOUS FILE NAME

|            |  |
|------------|--|
| DDFB       | - Derwent Drug File, Backfile 1964 - 1982                |
| DDFU       | - Derwent Drug File from 1983 - present                  |
| DEMAS      | - German Trademarks 1894 - Present                       |
| DETERM     | - DETERM-DECHEMA thermophysical property database        |
| DGENE      | - Derwent Geneseq Database 1981 - present                |
| DIOGENES   | - FDA Regulatory Updates 1976-present                    |
| DIPPR      | - AIChE Design Inst. Physical Property Data File         |
| DISSABS    | - Dissertation Abstracts from 1861 to present            |
| DJSMDs     | - Derwent Reaction Search Service DJSMS (Subscribers)    |
| DJSMONLINE | - Derwent Reaction Search Service DJSMS                  |
| DKF        | - The German Automotive Engineering Database 1974-date   |
| DPCI       | - Derwent Patents Citation Index 1978 to present         |
| DRUGB      | - Derwent Drug File, Backfile 1964 - 1982. (Subscribers) |
| DRUGMONOG  | - IMS Product Monographs (Approved Pharm. Industry Users |
| DRUGMONOG2 | - IMS Product Monographs                                 |
| DRUGU      | - Derwent Drug File from 1983-present (Subscribers)      |

Enter the appropriate file name or enter "IGNORE" to continue accessing the remaining files of your multiple file entry.

ENTER A FILE NAME OR (IGNORE):caplus

'IBIB' IS NOT A VALID FILE NAME

Enter "HELP FILE NAMES" at an arrow prompt (>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE):end

=> D L7 IBIB ABS 1-2

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:409776 CAPLUS

DOCUMENT NUMBER: 125:72051

TITLE: **Polymer**-dispersed liquid-crystal display device

INVENTOR(S): Abe, Tomoya; Okabe, Masahiro

PATENT ASSIGNEE(S): Hitachi Cable, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| JP 08104873            | A2   | 19960423 | JP 1994-242904  | 19941006 |
| PRIORITY APPLN. INFO.: |      |          | JP 1994-242904  | 19941006 |

AB The title display device uses a film composed of liquid crystal drops covered with a layer of HO(C<sub>3</sub>H<sub>6</sub>O)<sub>a</sub>(C<sub>2</sub>H<sub>4</sub>O)<sub>b</sub>(C<sub>3</sub>H<sub>6</sub>O)<sub>a</sub>H (a, b ≥ 1), which are dispersed in a **polymer** matrix.

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1987:95804 CAPLUS

DOCUMENT NUMBER: 106:95804

TITLE: Adjuvant effects of nonionic block **polymer** surfactants on liposome-induced humoral immune response

AUTHOR(S): Zigterman, Guy J. W. J.; Snippe, Harm; Jansze, Margriet; Willers, Jan M. N.

CORPORATE SOURCE: Dep. Immunol., State Univ. Utrecht, Utrecht, 3511 GG, Neth.

SOURCE: Journal of Immunology (1987), 138(1), 220-5  
CODEN: JOIMA3; ISSN: 0022-1767

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The ability of several surface-active agents to stimulate the humoral immune response in mice against haptenated liposomes was tested. The surfactants were block copolymers of hydrophilic polyoxyethylene (POE) and hydrophobic polyoxypropylene (POP) that differed in mol. weight, percentage of POE, and mode of linkage of POP to POE. The liposomes were haptenated with tripeptide-enlarged dinitrophenyl coupled to phosphatidylethanolamine, which was incorporated into the liposomal membrane. Addnl. injection of mice with surfactant stimulated serum hemagglutination titers and splenic plaque-forming cell (PFC) nos. to varying extents. Block **polymers** with POP chains flanking a POE center, as well as **polymers** with POE chains flanking a POP center, displayed high adjuvant activity. These block **polymers** stimulated the antibody response in a dose-dependent manner. They stimulated the antibody response with both high and low antigen doses. Furthermore, the addition of one of these adjuvants (25R1) reduced the amount of carrier lipid required in the liposome in order to obtain an optimal antibody response. The surfactants, which displayed high adjuvant activity, did not interfere with liposome stability as measured with a

liposome lysis assay. Moreover, in vitro preincubation of liposomes with a block **polymer** did not affect their immunogenicity. Optimal adjuvant activity was observed when both adjuvant and liposomes were administered by the same route. Simultaneous injection of both components, however, is not a prerequisite. Conclusively, it can be stated that nonionic block **polymer** surfactants are potent adjuvants for stimulation of the antibody response against haptenated liposomes.

=> D L9 IBIB ABS 1-9

L9 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:301156 CAPLUS

DOCUMENT NUMBER: 138:308050

TITLE: Improving the hydrophilicity of water repellent soil

INVENTOR(S): Kostka, Stanley J.; Bially, Paul Thomas

PATENT ASSIGNEE(S): Aquatrols Corporation of America, Inc., USA

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE            | APPLICATION NO. | DATE     |
|---|------|-----------------|-----------------|----------|
| WO 2003031535   | A1   | 20030417        | WO 2002-US32163 | 20021008 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |                 |                 |          |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |                 |                 |          |
| US 2003073583   | A1   | 20030417        | US 2002-265950  | 20021007 |
| WO 2003031536   | A1   | 20030417        | WO 2002-US32164 | 20021008 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |                 |                 |          |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |                 |                 |          |
| EP 1442096  | A1   | 20040804        | EP 2002-800965  | 20021008 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK   |      |                 |                 |          |
| EP 1442097  | A1   | 20040804        | EP 2002-800966  | 20021008 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK   |      |                 |                 |          |
| PRIORITY APPLN. INFO.:  |      |                 |                 |          |
|   |      | US 2001-328027P | P               | 20011009 |
|   |      | US 2002-266025  | A               | 20021007 |
|   |      | US 2002-265950  | A               | 20021007 |
|   |      | WO 2002-US32163 | W               | 20021008 |
|   |      | WO 2002-US32164 | W               | 20021008 |

AB Water repellent soil is treated with low concns. of a blend of alkyl polyglycoside and EO-PO block copolymer in a weight ratio of 6:1-0.5:1 of glycoside:block copolymer in order to rapidly increase the wetting rate of

the water repellent soil.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:384325 CAPLUS

DOCUMENT NUMBER: 133:31899

TITLE: Composition for forming protective coating and removing paint from articles subjected to paint spray

INVENTOR(S): Wilson, Neil R.; Summerfield, Steven R.; Clark, Mathew W.; Moore, Michael E.

PATENT ASSIGNEE(S): Gage Products Co., USA

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2000032704   | A1   | 20000608 | WO 1999-US28707 | 19991203 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |

PRIORITY APPLN. INFO.: US 1998-110734P P 19981203

AB Title composition for forming a protective coating comprises an adhesion reducing compound including a low surface energy material and/or a filler along with one or more optional ancillary ingredients such as adhesion promoters, dispersants, corrosion inhibitors, thickeners, surfactants, pH control agents, colorants, plasticizers, defoaming agents, and combinations thereof. The composition can also be used to strip paint from a workpiece by the following steps: (A) applying a protective coating to a surface of a workpiece prior to the workpiece being contacted with paint, (B) drying the protective coating onto the surface of the workpiece, (C) contacting the workpiece with paint, and (D) removing the paint from the painted workpiece by applying water at a pressure of .apprx.100-10000 lb/in.2.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:561321 CAPLUS

DOCUMENT NUMBER: 129:190564

TITLE: Room temperature vulcanizable silicone sealant compositions having a reduced stringiness and process for reducing the stringiness

INVENTOR(S): Lin, Chiu-sing; Lucas, Gary Morgan; Fitzsimmons, Kimberly M.

PATENT ASSIGNEE(S): General Electric Co., USA

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

|  |    |          |                |          |
|--|----|----------|----------------|----------|
| EP 857760  | A1 | 19980812 | EP 1998-300852 | 19980205 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, FI |    |          |                |          |
| JP 10292167  | A2 | 19981104 | JP 1998-16306  | 19980129 |
| CN 1190666   | A  | 19980819 | CN 1998-100292 | 19980205 |
| US 1997-795009 19970205  |    |          |                |          |

PRIORITY APPLN. INFO.:

AB The title compns. comprise (A) polysiloxanes HO(SiR'R'O)xH (R, R' = C1-40 hydrocarbyl; x = value to polymer viscosity 500-200,000 at 25°); (B) organosilicon compds. having ≥2 hydrolyzable groups or their partial hydrolysis products from RaSi(ON:CR'2)4-a, RaSi(OR')4-a, RaSi(OCOR')4-a, RaSi(NR'R'')4-a, and RaSi(NR'''COR')4-a (R, R', R''' = C1-40 hydrocarbyl; a = 0-2; R'' = H, R); (C) a nonionic surfactant chosen from polyethylene glycol, polypropylene glycol, ethoxylated castor oil, oleic acid ethoxylate, alkylphenol ethoxylate, polyethylene polypropylene glycol, and silicone polyether copolymers; (D) a reinforcing filler; and (E) a condensation cure catalyst. A composition comprising di-Me silicone oil 72.74, di-Me polysiloxane fluid 6, pyrogenic silica 8.87, Al stearate 0.10, and catalyst solution (comprising methyltriacetoxysilane 72.2664, di-tert-butoxydiacetoxysilane 27.1371, and dibutyltin dilaurate 0.5964%) 4% showed substantially reduced stringiness with addition of 1.5% silicone polyether surfactant.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:277690 CAPLUS

DOCUMENT NUMBER: 129:10586

TITLE: Photographic emulsion containing radiation-sensitive silver halide grains

INVENTOR(S): Tsaur, Allen Keh-Chang

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.              | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------------------|------|----------|-----------------|----------|
| JP 10115884             | A2   | 19980506 | JP 1997-265289  | 19970930 |
| GB 2317708              | A1   | 19980401 | GB 1997-20306   | 19970925 |
| US 1996-724716 19960930 |      |          |                 |          |

PRIORITY APPLN. INFO.:

AB The emulsion comprises co-precipitated radiation-sensitive Ag halide grains containing >50 mol% bromide based on Ag and a disperse medium, and satisfies the following conditions: (1) the grains having a variation coefficient <25%; (2) >90% of the total projected area of the grains being occupied by tabular grains having [111] principal plane and showing average thickness <0.07 μm; (3) the disperse medium being a polyalkylene oxide block copolymer surfactant containing 2 terminal lipophilic alkylene oxide blocks linked by a hydrophilic alkylene oxide block that occupies 4-96% of the mol. weight of the polymer. The emulsion containing super-thin tabular Ag halide grains with low disperse degree crystallites size and high bromide content is obtained.

L9 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:178113 CAPLUS

DOCUMENT NUMBER: 128:237173

TITLE: Limited-dispersity epitaxially sensitized ultrathin tabular-grain photographic emulsion

INVENTOR(S): Deaton, Joseph Charles; Fenton, David Earl; Tsaur, Allen Keh-chang

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: U.S., 12 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| US 5726007 | A    | 19980310 | US 1996-722403  | 19960930 |
|            |      |          | US 1996-722403  | 19960930 |

PRIORITY APPLN. INFO.: AB A photog. emulsion is disclosed comprised of copptd. radiation-sensitive silver halide grains containing greater than 70 mol percent bromide, based on silver, and exhibiting a coefficient of variation of less than 30 percent. Greater than 90 percent of total projected area of the grains is accounted for by tabular grains having {111} major faces, exhibiting a thickness of less than 0.07  $\mu$ m, and having latent image-forming silver salt epitaxy chemical sensitization sites on their surfaces, and a dispersing medium that contains a grain dispersity-reducing concentration of a polyalkylene oxide block copolymer surfactant comprised of two terminal lipophilic alkylene oxide block units linked by a hydrophilic alkylene oxide block unit accounting for from 4 to 96 percent of the mol. weight of the polymer. The emulsion offers unexpectedly low levels of min. d. and can be more easily manufactured as compared to conventional ultrathin tabular-grain emulsions with comparably limited grain dispersity.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1992:573526 CAPLUS  
DOCUMENT NUMBER: 117:173526  
TITLE: Lithographic desensitizing ink for carbonless paper  
INVENTOR(S): Hays, Byron G.; Petrone, John P.  
PATENT ASSIGNEE(S): BASF Corp., USA  
SOURCE: U.S., 7 pp. Cont.-in-part of U.S. Ser. No. 422,851, abandoned.  
CODEN: USXXAM

DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| US 5122186 | A    | 19920616 | US 1991-653731  | 19910211 |
|            |      |          | US 1989-422851  | 19891017 |

PRIORITY APPLN. INFO.: AB The title inks comprise alkylamine desensitizer having substituted secondary or tertiary amine or tertiary amine oxide, hydroxylated polymerized oil, and acidic resin dissolved in hydrophobic hydroxylic solvent, e.g. polyoxyalkylene, and optionally pigment. Thus, 96 base ink containing TiO<sub>2</sub> 145, CaCO<sub>3</sub> 68, fumed silica 68, tall oil rosin (Unitol NCY) 175, Pluronic-31R1 301, polymerized castor oil 175, and Magiesol 22 parts was mixed with 5 parts 80% solution of Damox 1010 (didecylmethylamine oxide) to give a lithog. ink showing tack 13.2, good transfer from lithog. plate, and good desensitization.

L9 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1990:116830 CAPLUS  
DOCUMENT NUMBER: 112:116830  
TITLE: The influence of different adjuvants on the immune response to a synthetic peptide comprising amino acid residues 9-21 of herpes simplex virus type 1 glycoprotein D

AUTHOR(S): Geerligs, H. J.; Weijer, W. J.; Welling, G. W.;  
Welling-Wester, S.  
CORPORATE SOURCE: Lab. Med. Microbiol., Rijksuniv. Groningen, Groningen,  
9713 EZ, Neth.  
SOURCE: Journal of Immunological Methods (1989), 124(1),  
95-102  
CODEN: JIMMBG; ISSN: 0022-1759  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The immunomodulating properties of different adjuvant systems on the murine humoral and cellular immune response to a synthetic peptide comprising amino acid residues 9-21 of glycoprotein D of herpes simplex virus type 1 (HSV-1) were investigated. For immunization, the peptide was conjugated to ovalbumin or bovine serum albumin by glutaraldehyde and the adjuvants used in this study were Freund's complete adjuvant (FCA), aluminum hydroxide, the Ribi adjuvant system (RAS) and two non-ionic block **polymer** surfactants, viz L101 and 31R1, in oil in water emulsions. High anti-peptide antibody titers were obtained after immunization with FCA, aluminum hydroxide, RAS and L101. All adjuvants, except RAS, stimulated the induction of delayed type hypersensitivity obtained after immunization with peptide 9-21 coupled to ovalbumin and elicited by injection of purified HSV-1 virions in the footpad. Challenge with a LD of HSV-1 showed that mice immunized with peptide 9-21 coupled to ovalbumin in combination with FCA, RAS and L101, resp., were significantly protected. Although immunization with peptide 9-21 coupled to ovalbumin combined with aluminum hydroxide stimulated induction of delayed type hypersensitivity, no significant protective immunity against the challenge was generated.

=> antigen (1) polymer  
260277 ANTIGEN  
205197 ANTIGENS  
322957 ANTIGEN  
(ANTIGEN OR ANTIGENS)  
970735 POLYMER  
808217 POLYMERS  
1317946 POLYMER  
(POLYMER OR POLYMERS)

L10 2606 ANTIGEN (L) POLYMER

=> copolymer and L10  
537585 COPOLYMER  
177027 COPOLYMERS  
584326 COPOLYMER  
(COPOLYMER OR COPOLYMERS)

L11 420 COPOLYMER AND L10

=> "thermal reverse"  
951547 "THERMAL"  
66 "THERMALS"  
951576 "THERMAL"  
("THERMAL" OR "THERMALS")  
183766 "REVERSE"  
7695 "REVERSES"  
190691 "REVERSE"  
("REVERSE" OR "REVERSES")  
L12 40 "THERMAL REVERSE"  
("THERMAL" (W) "REVERSE")

=> L12 and L11  
L13 0 L12 AND L11

=> temperature (1) sensitive

501437 TEMPERATURE  
73072 TEMPERATURES  
565106 TEMPERATURE  
(TEMPERATURE OR TEMPERATURES)  
2728511 TEMP  
702586 TEMPS  
3037707 TEMP  
(TEMP OR TEMPS)  
3141603 TEMPERATURE  
(TEMPERATURE OR TEMP)  
531949 SENSITIVE  
85 SENSITIVES  
531990 SENSITIVE  
(SENSITIVE OR SENSITIVES)  
L14 68199 TEMPERATURE (L) SENSITIVE

=> L14 and l11  
L15 3 L14 AND L11

=> D L15 IBIB ABS 1-3

L15 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1999:518942 CAPLUS  
DOCUMENT NUMBER: 131:155512  
TITLE: Optical fiber surface plasmon sensor for detecting  
biological substances, etc.  
INVENTOR(S): Nomoto, Takeshi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------|------|----------|-----------------|----------|
| JP 11223597 | A2   | 19990817 | JP 1998-25932   | 19980206 |
|             |      |          | JP 1998-25932   | 19980206 |

PRIORITY APPLN. INFO.:  
AB The sensor free from temp.- and pressure-dependent drift of  
resonance conditions has an optical fiber in which the core fiber is  
coated with a clad layer in some part and coated with a metal layer in  
another part, and a part of the metal layer has a dielec. layer  
sensitive to analytes in a direction parallel to the fiber axis.  
The dielec. layer sensitive to analytes may be a polymer  
layer supporting antigens, antibodies, hormones, receptors,  
polypeptides, nucleic acids, cells, glycoproteins, lipids, and/or  
pigments. A part (20 mm length from one end) of a core layer of a  
step-index multimode optical fiber was removed, the exposed core layer was  
coated with a Au layer by vapor deposition, and the end was coated with a  
Ag layer as a reflector. A dielec. layer supporting anti-HIV-1 env  
gp120/160 monoclonal antibody was formed on the Au layer only in 10 mm  
length from the end by treating the Au layer with cystamine  
dihydrochloride, bis(sulfosuccinimidyl) suberate, and then the antibody to  
give a sensor, which detected recombinant HIV-1 gp120 in a wide concentration  
range. A similarly prepared sensor having a 2-ethylhexyl  
methacrylate-styrene copolymer layer on the Au layer was useful  
for determination of hexane.

L15 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1993:534538 CAPLUS  
DOCUMENT NUMBER: 119:134538  
TITLE: Targetable photoactivatable drugs. 3. In vitro  
efficacy of polymer bound chlorin e6 toward human

hepatocarcinoma cell line (PLC/PRF/5) targeted with galactosamine and to mouse splenocytes targeted with anti-Thy 1.2 antibodies  
 AUTHOR(S): Rihova, Blanka; Krinick, Nancy L.; Kopecek, Jindrich  
 CORPORATE SOURCE: Inst. Microbiol., Czech Repub. Acad. Sci., Prague, 14220, Czech.  
 SOURCE: Journal of Controlled Release (1993), 25(1-2), 71-87  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Chlorin e6 and HPMA **copolymer**-bound chlorin e6 were compared with chlorin e6 **polymer** conjugates containing galactosamine or anti-Thy 1.2 antibody as targeting moieties. Galactosamine recognizes asialoglycoprotein receptors on the human hepatocarcinoma cell line PLC/PRF/5 and the anti-Thy 1.2 antibody interacts with Thy 1.2 alloantigens on mouse splenic T cells. The efficiency of photodynamic injury as a function of incubation time and **temp.**, and irradiation time was studied. Two-day-old cultures of PLC/PRF/5 cell line were most **sensitive** to HPMA **copolymer** bound chlorin e6 (targeted or nontargeted), whereas no differences were observed when free drug was tested on 1-, 2- or 3-day-old cultures. Dark toxicity of the free drug was observed at concns. as low as 2 + 10-6 M. Dark toxicity decreased when chlorin e6 was bound to HPMA **copolymers**, especially to conjugates containing targeting moieties. The effect of incubation time was seen only in the hepatocarcinoma cell culture. For galactosamine-targeted HPMA **copolymer** bound chlorin e6, 2-3 h were necessary to induce a pronounced killing effect. For anti-Thy 1.2 targeted polymeric drug and for free chlorin e6, 1 h of incubation was sufficient to load the cells with a photolytic dose of chlorin e6. Dependence on the time of irradiation was observed in both targeted conjugates. One hour of irradiation induced only limited photolysis, whereas 7.5 h of irradiation was necessary for substantial photodynamic injury. Photodynamic destruction of cells exposed to free drug was similar for irradiation periods of 1-7.5 h. In accordance with the mechanism of cellular uptake of polymeric conjugates by receptor-mediated endocytosis, the conjugates were less photodynamically active when incubated with cell cultures at a lower (4°) **temp.**  
 Nontargeted polymeric chlorin e6 was always considerably less phototoxic when compared to targeted HPMA **copolymer** conjugates. Antibody response to thymus-dependent **antigen** (SRBC) induced in vitro is more **sensitive** to the targeted photosensitizer, if compared with the estimation of cell viability. It suggests that lower concns. of the photosensitizer do not destroy (disintegrate) the target cells, but their function and/or proliferation may be impaired.

L15 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1989:628614 CAPLUS  
 DOCUMENT NUMBER: 111:228614  
 TITLE: **Temperature-sensitive** polymer gels for delivering, removing, or reacting substances  
 INVENTOR(S): Hoffman, Allan S.; Monji, Nobuo  
 PATENT ASSIGNEE(S): Genetic Systems Corp., USA  
 SOURCE: PCT Int. Appl., 63 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.                     | KIND | DATE     | APPLICATION NO. | DATE     |
|--------------------------------|------|----------|-----------------|----------|
| WO 8706152                     | A1   | 19871022 | WO 1987-US886   | 19870415 |
| W: AU, DK, JP, KR              |      |          |                 |          |
| RW: CH, DE, FR, GB, IT, NL, SE |      |          |                 |          |
| US 4912032                     | A    | 19900327 | US 1986-948377  | 19861231 |

AU 8773519                    A1      19871109      AU 1987-73519      19870415  
EP 267239                    A1      19880518      EP 1987-903136      19870415

R: CH, DE, FR, GB, IT, LI, NL, SE

PRIORITY APPLN. INFO.:

US 1986-853697      19860417  
US 1986-948377      19861231  
US 1985-729510      19850502  
US 1986-854831      19860428  
WO 1987-US886      19870415

AB Substances may be delivered into, removed from, or reacted with a selected environment using polymer gels or coatings characterized by a critical solution temperature (CST). The CST as well as the pore structure, size, and distribution, and the absorbing capacity of the gel may be selectively controlled. Binding components may be phys. or chemical immobilized within the polymer gels and the gels may be used to sep. desired substances from a solution or to deliver a substance (e.g. hormone, vitamin, drug, dye, etc.). A (bio)chemical active component may be immobilized within the gel for selectively controlling a reaction within a particular environment. Also, a method for altering the surface wettability of CST polymers is disclosed. Polymer gels were made with 20% N-iso-Pr acrylamide (monomer) and methylene bisacrylamide (crosslinker) in H<sub>2</sub>O or DMSO. Swollen circles of gel films were heated to 50° in buffer for 3 min, causing deswelling or desolvating of the gels. The deswelled films were incubated overnight at 4° in solns. containing myoglobin (17,800 mol. weight) and vitamin B12 (1,350 mol. weight). The films were removed, rinsed in room temperature buffer, deswelled at 50° for 4 min, and concns. of myoglobin and vitamin B12 released were determined at 280 and 360 nm, resp. The gel synthesized in H<sub>2</sub>O absorbed and delivered myoglobin while the gel synthesized in DMSO did not. Both gels absorbed and delivered vitamin B12. Release kinetics of the vitamin from various gels showed 2 regions over time. The 1st occurred within 5 min of the temperature change and was a relatively sudden release of the solution nearest the surface of the gel. The 2nd region showed a much slower diffusion rate out of the gel after the initial stage shrinkage was complete.